

REMARKS

Applicants have carefully reviewed the Office Action dated November 18, 2004, and respectfully request reconsideration in view of the following remarks. A separate petition and fee to extend the time for response by three (3) months accompany this response.

Claims 1-32 are pending in this application. Of these claims, Claims 1-27 have been rejected, while claims 28-32 have been withdrawn from further consideration, as being drawn to a non-elected invention.

Election/Restriction - 35 U.S.C. 121

Applicants affirm their election to prosecute the invention of Group I, Claims 1-27 drawn to a coating composition.

Applicants expect to file a divisional application to the non-elected claims.

The Invention

The invention is directed to a lower body chip resistant primer composition useful in forming two-tone automotive finishes in a reduced number of steps. The primer composition of the invention makes possible the elimination of conventional, difficult to apply, stone guard urethane primers, and also reduces the number of coating and baking cycles to achieve a two-tone finish, i.e., the invention utilizes 2 bakes and 1 clearcoat spraying operation, in comparison to existing two-tone processes that operate with 3 bakes and 2 clearcoat spraying operations.

The simplified process of this invention is enabled by use of the novel solvent borne primer composition which not only has good chip performance (which is needed on lower accent areas of vehicles, such as on the lower portion of the doors, fenders, and quarter panels where stone impact and chipping is the worst), but also has good wet-on-wet workability with an overlying basecoat with no sagging, popping, and mud-cracking problems,

which properties have not been previously achieved with competitive solvent borne chip resistant primers. Most often, the typical chip resistant primers in the lower body areas had to be baked before application of the basecoat or topcoat finish.

Applicants have discovered that by blending a soft branched polyester with a high Tg hard branched polyester, along with barium sulfate and crosslinker components, an excellent holdout capable composition is provided which is capable of preventing intermixing at the interfacial boundary between the wet primer layer and wet colored basecoat layer applied wet-on-wet thereover, without sacrificing chip resistance in the lower body area and surface appearance of the overall two tone finish. So far no one has done any work to achieve a solvent borne primer that has good wet-on-wet workability with a basecoat, without sacrificing chip performance and surface appearance.

Claim Amendments

Claim 1 has been amended to more clearly point out the constituents used in the primer, particularly the specific blend of polyester resins, along with barium sulfate and crosslinker components, which are needed to achieve the desired properties. Support for this amendment can be found throughout the specification, such as, on page 4, lines 24-26 and also in original claims 2-4. The desired wet-on-wet workability with a colored basecoat has also been further defined in claim 1, as shown on page 5, lines 3-5 of the specification. No new matter is believed to be introduced. Claims 2-4 have also been adjusted to conform to amended claim 1. In addition, the term "consists of" has been used in Claims 2-4 to point out that the preferred polyester blend only consists of the two polyesters claimed. Claim 33 has also been added to cover certain preferred branched polyester resins, as recited on page 6, lines 12-14 of the specification.

Claim Rejections – 35 USC § 103

Claims 1-15, and 21-26 were rejected under 35 U.S.C. 103(a) as being obvious over Tobias et al (US 4,238,583) in view of Iwato et al (US 4,450,200). Reconsideration and withdrawal of this rejection are respectfully requested.

Tobias et al. describe various high solids (low solvent) solvent borne primer or topcoat compositions that contain a branched polyester as the film-forming polymer. However, Tobias et al do not recognize, teach or suggest that a blend of high and low Tg polyester resins can be used, to form a solvent borne primer coating composition with good chip resistance and wet-on-wet workability. Blends of high and low Tg polyester resins are not even discussed therein. In addition, as noted by the examiner, nowhere in Tobias et al do they show how to use barium sulfate as a rheology and flow control agent to provide good wet on wet workability without causing sagging, popping, and mud cracking. The only coatings described in Tobias are baked primers (see col. 5, lines 1-7) which leads away from the present invention.

As to Iwato et al, they describe chip resistant primer compositions containing polyester, aminoplast resin, talc and barium sulfate. These compositions are used to replace conventional urethane stone guard primers in the lower portions of the vehicle (see col. 6, lines 34-57, step 4), similar to the compositions of the present invention. However, in Iwato et al, the lower stone guard primer is baked before the application of a colored basecoat thereover. No holdout capability or wet on wet workability with the basecoat finish layer is taught or suggested therein, which also leads away from the invention. The ability to provide a lower body primer that can eliminate a primer bake before application of a basecoat is one of the main advantages of the coatings of the present invention, which is not shown in the cited art.

In addition, the polyester resins disclosed in Iwato et al. are designed to have a low hydroxyl number of 30-75. Hydroxyl number is one key attribute to achieving successful chip resistance, since it controls the crosslink density of the coating film. In the case of too low of OH number and crosslinking, the coating will not possess the strength properties required to withstand impact and shear forces applied by stones and gravel under normal driving

conditions. In the present invention, higher hydroxyl numbers are specified, i.e., hydroxyl numbers between 75-400. Iwato specifically teach away from polyesters having such a high hydroxyl number, i.e., of more than 75 (see col. 3, lines 46-49). Also, no hard and soft polyester blends are even discussed in Iwato et al. Only soft polyesters are used in Iwato et al to impart soft and flexible properties to the coating (see col. 4, lines 61-68). The combination of hardness and softness in the polyester resins of the present invention is a distinct advantage, since it provides a crosslinked matrix with hard and soft segments which make the film tough enough for chip resistance, but flexible enough in the soft portions to dissipate the stone impact and prevent cracking.

For the forgoing reasons, even if one applied the barium sulfate of Iwato et al to the compositions of Tobias et al, the combination suggested by the examiner would not have led one skilled in the art to arrive at the invention, as presently claimed, which requires blends of high and low Tg polyesters along with barium sulfate, and certainly not with any reasonable expectation of success of producing a polyester coating composition that has holdout capability with a basecoat, as well as chip resistance and good surface appearance.

Furthermore, citing references which merely indicate that isolated elements and/or features recited in the claims are known is not a sufficient basis for concluding that the combination of claimed elements would have been obvious, absent some suggestion or evidence of a motivating force which would have impelled persons skilled in the art to do what applicants have done. It is only with hindsight having Applicants' invention in mind that one would pick and choose isolated features of Iwato et al and combine them with the composition of Tobias et al and then also decide to use a blend of hard and soft polyester resins, without any suggestion to do so from any of the references, to arrive at the present invention. This is not a sufficient basis to maintain this obviousness rejection. Too much picking, choosing, extrapolating, and speculating would be unduly involved and highly unwarranted.

Claims 16, 17, 18, 20 and 27 were rejected under 35 U.S.C. 103(a) as being obvious over obvious over Tobias et al (US 4,238,583) in view of Iwato et al (US 4,450,200), as applied to claim 1 above, and further in view of Scheibelhoffer et al (US 5,549,929). Reconsideration and withdrawal of this rejection are respectfully requested.

It is submitted that Claim 1 as amended is patentable over the cited primary references. As claims 16, 17, 18, 20 and 27 depends directly or indirectly from claim 1, it is submitted that these claims should also be deemed patentable.

Moreover, it is only with hindsight having Applicants' invention in mind that one would pick and choose isolated features of Scheibelhoffer et al (which describe hot melt pastes as opposed to flowing liquid coatings at ambient temperatures) and combine them with the primary references to arrive at the present invention. This is not a sufficient basis to maintain this obviousness rejection and it should be withdrawn.

Claim 19 was rejected under 35 U.S.C. 103(a) as being obvious over obvious over Tobias et al (US 4,238,583) in view of Iwato et al (US 4,450,200), as applied to claim 1 above, and further in view of Yuan (US 5,468,791). Reconsideration and withdrawal of this rejection are respectfully requested.

It is submitted that Claim 1 as amended is patentable over the cited primary references. As claim 19 depends directly from claim 1, it is submitted that claim 19 should also be deemed patentable.

Moreover, while Yuan disclose chip resistant polyester based primers containing zircoaluminate coupling agents for improved adhesion to overlaying water-borne basecoats, this reference is only directed to a baked primer having no wet on wet capability (see col. 4, lines 35-42). No polyester blends or barium sulfate are even discussed to impart such capability, without sacrificing chip performance and surface appearance. This invention clearly teaches away from wet on wet primers and it is not seen why one would apply the teachings of isolated features of this reference to the other references to try to arrive at the present invention. It is respectfully submitted that this

rejection is based on improper hindsight reasoning and should also be withdrawn.

Supplemental IDS

Applicants' would also like to bring to the examiner's attention additional references now cited in Applicants' supplemental information disclosure statement filed herewith.

Conclusion

The claims have been amended to more clearly point out the invention and the patentable differences between Applicants' invention and the cited art have been set forth. The application should now be in allowable form. If for some reason the application is not allowable, Applicants' attorney requests a telephonic interview with the Examiner to discuss the case and any additional amendments to the claims that may be required to place the case in allowable form.

Respectfully submitted, . . .



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